

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Transition Process for 700 MHz Public Safety)	PS Docket No. 12-94
Broadband Waiver Recipients)	

COMMENTS OF ALCATEL-LUCENT

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Alcatel-Lucent submits these comments to the Federal Communications Commission (“FCC” or “Commission”) in response to the above-captioned Public Notice seeking comment on issues related to the transition process for 700 MHz public safety broadband waiver recipients.

I. INTRODUCTION AND SUMMARY

Alcatel-Lucent is the trusted transformation partner of service providers, enterprises, and governments worldwide, providing solutions to deliver voice, data and video communications services to end-users. A leader in fixed, mobile and converged broadband networking, IP and optics technologies, applications and services, Alcatel-Lucent leverages the unrivaled technical and scientific expertise of Bell Labs, a leading innovator in the communications industry.

Alcatel-Lucent has been a steadfast leader in the government-industry partnership to implement an interoperable, nationwide public safety broadband network (“PSBN”). Alcatel-Lucent supports use of interoperable, open-standards-based, commercial broadband technologies in the PSBN to protect the life, health and safety of our Nation’s first responders and citizens. The company’s proposal to dedicate the data portion of the U.S. Public Safety 700 MHz spectrum to a broadband-only block, submitted to the Commission in 2005, helped pave the way

for the nationwide PSBN this proceeding ultimately seeks to advance. Alcatel-Lucent is partnering with the City of Charlotte to build its PSBN and is thus distinguished for its real-world experience designing and implementing a mission-critical, interoperable PSBN using the open-standards-based, commercial mobile broadband technology of choice: Long Term Evolution (“LTE”).

Alcatel-Lucent appreciates the Commission seeking input from interested stakeholders on the future role for early deployments in the PSBN. In these Comments, Alcatel-Lucent first demonstrates that the Commission maintains substantial authority to facilitate early deployment of the PSBN, including to permit current waiver grantees to continue deployment and to grant authority to additional jurisdictions seeking to commence early deployment of the PSBN. The new legislation affords the Commission additional flexibility to allow jurisdictions that deploy early to utilize the D-block, as well as take advantage of partnership opportunities with secondary users, thereby maximizing existing infrastructure and revenue sources for early deployments and the forthcoming nationwide PSBN.

The public interest weighs heavily in favor of the Commission exercising its legal authority to continue the early deployment of the PSBN through the current waiver jurisdictions as well as additional jurisdictions that demonstrate the ability to move forward with such deployment. To that end, the Commission should condition early PSBN deployments to maximize their benefits, including facilitating integration into the future nationwide PSBN. It is absolutely essential, for example, that all deployments are compliant with 3rd Generation Partnership Project (“3GPP”) standards to facilitate interoperability with, and easy transition into, the nationwide network. Among other key recommendations, Alcatel-Lucent urges the Commission continue to require interoperability showings by jurisdictions seeking early

deployment authority, modified to reflect the recommendations of the Public Safety Interoperability Board, and to scrutinize deployment of cores to ensure resources are not consumed by irrational deployment of numerous, duplicative cores, which could negatively affect interoperability (and *operability*) of the nationwide network.

Alcatel-Lucent believes that the long-term viability of the nationwide PSBN depends on the Commission, the National Telecommunications and Information Administration (“NTIA”) and the forthcoming First Responder Network Authority (“FirstNet”) seeking out collaboration and partnership with each other and with states to implement the nationwide network. Especially considering the new legislation provides only \$7 Billion for the build-out of the nationwide network, it is essential that FirstNet not attempt to “go it alone.” FirstNet should proactively collaborate with the states, rendering state opt-out moot by essentially empowering states to “opt-in” to the FirstNet network by leveraging the ability of the states to implement and contribute state infrastructure to that network. States have a greater capability to identify and leverage a broad ecosystem of public-private partners that can provide existing infrastructure and funds to the PSBN, including regional and rural telecommunications carriers, utilities, and others. Utilities are especially well-suited public safety partners due to their similar needs for geographic coverage and mission critical communications. Avoiding a top-down, national carrier model that embraces state implementation is critical for maximizing public-private resources and minimizing the risks to nationwide interoperability of numerous states opting-out of the FirstNet network.

For these reasons, Alcatel-Lucent urges the Commission to enable currently authorized as well as new early deployments to move forward, and to work with all government

and public safety stakeholders to ensure a smooth transition to an interoperable self-sustaining nationwide PSBN.

II. THE COMMISSION’S CONTINUED AUTHORITY OVER THE PUBLIC SAFETY BROADBAND SPECTRUM AND THE 700 MHZ D BLOCK SPECTRUM GIVES IT BROAD FLEXIBILITY IN TRANSITIONING THE 700 MHZ PUBLIC SAFETY BROADBAND WAIVERS

The Commission has broad statutory authority under the Communications Act, as amended, 47 U.S.C. § 151 *et seq.* (“the Communications Act”), over the licensing and use of spectrum allocated for state and local public safety users, including the 700 MHz Public Safety Broadband Spectrum and the Upper 700 MHz D Block (together the “Public Safety Broadband Spectrum”). Nothing in the recently-enacted Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”)¹ limits this fundamental authority. Indeed, the Spectrum Act reconfirms the Commission’s broad powers over the Public Safety Broadband Spectrum, even though Congress delegated certain discrete responsibilities to NTIA and created and defined the role of FirstNet. Similar to other Commission-licensee relationships—including the relationship with the current Public Safety Broadband Licensee (“PSBL”), the Public Safety Spectrum Trust (“PSST”)—the Commission retains authority over the basic licensing and service rules of the Public Safety Broadband Spectrum.² FirstNet, for its part, is responsible for overseeing the design, development, construction, and operation of a wireless broadband network pursuant to the terms of its license granted by the Commission.

Just as the Spectrum Act does not disturb the Commission’s statutory spectrum authority, nothing in the Spectrum Act limits the Commission’s ability to extend or modify the

¹ See Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012) (“Spectrum Act”).

² See 47 U.S.C. §§ 301, 303.

existing 700 MHz Public Safety Broadband Waivers (the “waivers”), or to grant additional early deployment authority in the future. As the Commission recognizes in the Public Notice,³ it has available various regulatory mechanisms to effectuate the transition of the waivers from the previous public safety broadband license regime to the new structure put into place by the Spectrum Act. The Commission should examine these mechanisms and identify long-term and interim solutions that would permit the waiver jurisdictions to continue their deployment of interoperable public safety broadband deployments in coordination with FirstNet—a result that would be consistent with the Spectrum Act and would serve the public interest.

A. The Commission Retains Licensing Authority Over the 700 MHz Public Safety Broadband Spectrum

Under the Communications Act, the Commission is solely responsible for the licensing and oversight of use of the electromagnetic spectrum for radio communications in all cases except for where the stations are owned and operated by the United States.⁴ Nothing in the Spectrum Act modified this regime. Rather, in the Spectrum Act, Congress directed the Commission to transfer a license for the Public Safety Broadband Spectrum to FirstNet;⁵ it did not divest the Commission of its statutory authority over the underlying spectrum or even contemplate that the Commission would otherwise abdicate its spectrum oversight responsibilities.

The public safety broadband governance structure created by the Spectrum Act is premised upon recognition of the Commission’s authority over the Public Safety Broadband

³ See *Public Safety and Homeland Security Bureau Seeks Comment on Transition Process for 700 MHz Public Safety Broadband Waiver Recipients*, PS Docket No. 12-94, Public Notice, DA 12-555, 3-4 (rel. Apr. 6, 2012) (“Public Notice”).

⁴ See 47 U.S.C. §§ 301, 305.

⁵ Spectrum Act § 6201.

Spectrum, and this principle is embodied throughout the Spectrum Act. The Spectrum Act is clear that the Commission serves as the licensing authority for the nationwide PSBN and performs all of the functions necessary to exercise such authority. To illustrate, under Section 6201, the Commission issues the initial licenses, is responsible for renewals, and helps to facilitate the transition of the spectrum to FirstNet.⁶ Moreover, Section 6206 recognizes the Commission's authority to impose build out requirements as a condition to the license granted to FirstNet.⁷

In addition to these core licensing functions, several additional sections of the Spectrum Act reinforce the Commission's authority over the Public Safety Broadband Spectrum:

- In Section 6003, the Commission is given general responsibility for implementing and enforcing the provisions of the Spectrum Act.⁸
- In Section 6201, the Commission is directed “to take all actions necessary to facilitate the transition of the existing public safety broadband spectrum” to FirstNet.⁹
- In Section 6203, the Commission is given authority to identify the minimal technical requirements for interoperability that will guide FirstNet in designing the nationwide, interoperable broadband network.¹⁰
- In Section 6302, the Commission is given authority over approving the interoperability showings of states seeking to opt-out from participation in the deployment of the nationwide, interoperable broadband network as proposed by FirstNet.¹¹

⁶ *Id.*

⁷ *See id.* § 6206(b)(3) (“the nationwide, interoperable public safety broadband network, consistent with the license granted under section 6201, shall require deployment phases with substantial rural coverage milestones as part of each phase of the construction and deployment of the network.”).

⁸ *Id.* § 6003.

⁹ *Id.* § 6201(c).

¹⁰ *Id.* § 6203.

¹¹ *Id.* § 6302(e)(3)(C).

- In Section 6213, the Commission is enabled to provide technical assistance to FirstNet and to take “any action necessary to assist the First Responder Network Authority in effectuating its duties and responsibilities” under the Spectrum Act.¹²

In addition to these numerous reiterations of the Commission’s authority over the Public Safety Broadband Spectrum, it is telling that Congress did not limit this authority or divest the Commission of its responsibilities under the Communications Act. For example, nothing in the Spectrum Act affects the Commission’s statutory authority to oversee licensee use of spectrum,¹³ such as through actions to protect against harmful interference,¹⁴ and by adopting

¹² *Id.* § 6213.

¹³ 47 U.S.C. §§ 154(i) (“[t]he Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this Act, as may be necessary in the execution of its functions”), 154(j) (“[t]he Commission may conduct its proceedings in such manner as will best conduce to the proper dispatch of business and to the ends of justice”), 301, 302, 303(f), 303(r) (instructing the Commission to “[m]ake such rules and regulations and prescribe such restrictions and conditions, not inconsistent with law, as may be necessary to carry out the provisions of this Act”), 316; *see also Improving Public Safety Communications in the 800 MHz Band*, WT Docket No. 02-55, ET Docket No. 00-258, ET Docket No. 95-18, Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order, 19 FCC Rcd 14969, ¶ (2004) (“*800 MHz Report and Order*”) (Pursuant to Sections 316, 303, 301, and 4(i) of the Act, we have broad authority to effectuate a spectrum management plan that includes license modifications to serve the public interest.”); *Telocator Network of America v. Federal Communications Commission*, 691 F.2d 525, 538 (D.C. Cir. 1982) (“First, the Commission is empowered by the Communications Act to foster innovative methods of exploiting the radio spectrum in order to “generally encourage the larger and more effective use of radio.” Second, when piloting such a regulatory course, the Commission functions as a policymaker and, inevitably, a seer-roles in which it will be accorded the greatest deference by a reviewing court.”) (internal citations omitted); *Teledesic LLC v. Federal Communications Commission*, 275 F.3d 75, 84 (D.C. Cir. 2001) (same).

¹⁴ 47 U.S.C. §§ 302a(a) (“The Commission may, consistent with the public interest, convenience, and necessity, make reasonable regulations (1) governing the interference potential of devices which in their operation are capable of emitting radio frequency energy by radiation, conduction, or other means in sufficient degree to cause harmful interference to radio communications”), 303(e) (instructing FCC to “[r]egulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and from the apparatus therein”), 303(f)) (instructing FCC to “[m]ake such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this chapter”), 303(r), 316. *See also Petition of Cingular Wireless LLC for a Declaratory Ruling that Provisions of the Anne Arundel County Zoning Ordinance are Preempted*, WT Docket No. 02-100, Memorandum Opinion and Order, 18 FCC Rcd 13126,

waivers and modifying licenses as necessary to serve the public interest.¹⁵ The Commission retains ample legal authority under the Spectrum Act to extend the existing waivers and issue additional waivers for early interoperable deployments.

That the FCC retains oversight over Public Safety Broadband Spectrum is consistent with the traditional dichotomy by which the Commission oversees state and local government spectrum licensing issues, while NTIA manages use of spectrum by the Federal government.¹⁶ The Spectrum Act does not disturb this dichotomy or expand NTIA's spectrum management authority. On the contrary, compared to the expansive delegation of authority to

13132, ¶ 13 (WTB 2003) (“The Commission and federal courts have consistently found that the Commission’s authority in the area of [interference] is exclusive and any attempt by State or local governments to regulate in the area of [radio frequency interference] is preempted.”); *New York SMSA Ltd. Partnership v. Town of Clarkstown*, 612 F.3d 97, 105 (2d Cir. 2010) (recognizing field preemption with respect to the regulation of radio frequency interference); *see also Freeman v. Burlington Broadcasters*, 204 F.3d 311, 320 (2d Cir. 2000) (“Congress intended that the FCC enjoy exclusive jurisdiction to regulate RF interference phenomena,” and that “federal law has preempted the field of RF interference regulation”); *Broyde v. Gotham Tower, Inc.*, 13 F.3d 994, 997 (6th Cir.1994) (affirming dismissal of nuisance suit regarding interference with home electronic equipment because “FCC’s jurisdiction ‘over technical matters’ associated with the transmission of radio signals ‘is clearly exclusive.’”).

¹⁵ *See* 47 U.S.C. §§ 303(r), 316 (“[a]ny station license . . . may be modified by the Commission . . . if in the judgment of the Commission such action will promote the public interest, convenience and necessity”); *WAIT Radio v. FCC*, 418 F. 2d 1153 (D.C. Cir. 1969); 47 C.F.R. § 1.4; *see also California Metro Mobile Communications v. FCC*, 365 F.3d 38, 45 (D.C. Cir.2004) (“CMCC”) (“Section 316 grants the Commission broad power to modify licenses; the Commission need only find that the proposed modification serves the public interest, convenience and necessity.”); *Peoples Broadcasting Co. v. United States*, 209 F.2d 286, 288 (D.C. Cir. 1953) (license modifications need not be consensual); *Community Television, Inc. v. FCC*, 216 F.3d 1133, 1140 (D.C. Cir. 2000); *Rainbow Broadcasting v. FCC*, 949 F.2d 405, 410 (D.C. Cir. 1991) (Commission has broad authority to change the spectrum assignments of licensees).

¹⁶ As discussed above, the Commission is granted statutory authority over licensing and supervision of spectrum licenses by Title III of the Communications Act *See* 47 U.S.C. §§ 301 *et seq.* This includes spectrum use by consumers, commercial and non-profit entities, and governments at the state, local, regional, and Tribal levels. By contrast, Section 305(a) of the Communications Act empowers NTIA to execute the President’s authority over assigning frequencies to radio stations belonging to and operated by the United States. 47 U.S.C. § 305.

the Commission, NTIA's role under the Spectrum Act is limited and expressly defined. Indeed, Section 6003 of the Spectrum Act makes clear that the Assistant Secretary is given authority only to promulgate new regulations "as are necessary to implement and enforce any provision of this title that is *expressly required* to be carried out by the Assistant Secretary."¹⁷

NTIA's primary roles with respect to the nationwide, interoperable PSBN are to assist in the initial formation and funding of FirstNet, and to administer a Federal grant program. Specifically, the Spectrum Act gives NTIA authority to borrow money from the Treasury to implement its provisions,¹⁸ to review fees assessed by FirstNet,¹⁹ to distribute State and Local Implementation Grants,²⁰ and to review the applications of opt-out States for network deployment grant funding and to lease capacity from FirstNet.²¹ In each case, these administrative responsibilities of NTIA either address startup issues likely to present themselves in the infancy of FirstNet and the national PSBN or stem directly either from NTIA's borrowing authority or authority over States electing to opt-out of the FirstNet deployment. Perhaps most instructive, while the Spectrum Act mandates that the FirstNet Board include the Secretary of Commerce, U.S. Attorney General and the Director of the Office of Management Budget (and 12 other individuals appointed by the Secretary of Commerce representing non-Federal interests),²² there is no seat on the Board reserved for NTIA. The Spectrum Act gives NTIA essentially no role in the day-to-day operations of FirstNet.

¹⁷ Spectrum Act § 6003 (emphasis added).

¹⁸ *Id.* § 6207.

¹⁹ *Id.* § 6208(c).

²⁰ *Id.* §§ 6301, 6302.

²¹ *Id.* § 6302(e)(3)(C)(iii)

²² *Id.* § 6204.

For its part, FirstNet will be the spectrum licensee and network operator, not a spectrum regulator. To some extent, FirstNet steps into the shoes of the PSST as the new PSBL. Like the current PSBL, FirstNet is directed to manage the PSBN in consultation with and in the interest of the state, tribal, and local public safety stakeholders.²³ These non-Federal public safety communities will be the primary users of the spectrum and the actual operators of the stations authorized. As is typical for Commission licensees, the specifics of designing and constructing the nationwide PSBN will be the responsibility of FirstNet—consistent with the terms of its Commission-issued license—and the Commission retains its full authority as the licensing agency for this spectrum.

B. The Commission Has Broad Regulatory Authority to Facilitate the Transition of the 700 MHz Public Safety Broadband Waivers

The Commission retains broad regulatory authority to adopt rules and regulations affecting the users of the Public Safety Broadband Spectrum, including the waiver recipients. Nothing in the Spectrum Act expressly or even implicitly limits the Commission’s authority to continue to grant public safety broadband waivers or requires the Commission to terminate the existing waivers.

On the contrary, Congress specifically directed the Commission “to take all actions necessary to facilitate the transition of the existing public safety broadband spectrum to” FirstNet.²⁴ Enabling the existing waiver recipients to continue to deploy interoperable PSBNs—

²³ *See, e.g., Id.* §§ 6202(b)(2)(B) (the network shall be developed and operated taking into account plans developed in the State, local, and tribal planning and implementation grant program), 6206(b)(1) (the network shall be operated in consultation with State, tribal, and local public safety entities), 6206(b)(2)(D) (FirstNet shall address special considerations for areas or regions with unique needs), 6206(c)(2) (FirstNet shall consult with State, tribal, and local entities regarding distribution of funds).

²⁴ *Id.* § 6201(c).

appropriately conditioned on cooperation with FirstNet or an opting-out state and satisfaction of applicable interoperability requirements—would be entirely consistent with this direction.

Similarly, electing to grant additional waivers would serve the public interest by expediting the deployment of much needed broadband communications for first responders and facilities on which the national PSBN could be based.

There is nothing in the Spectrum Act to prevent the Commission from preserving or extending the waivers—at least on a transitional basis—pending execution of new leases or another permanent arrangement with FirstNet. In this way, FirstNet’s role as the licensee is analogous to the PSST’s current role in entering leasing arrangements with waiver jurisdictions. Far from requiring the elimination of the existing waivers, the Spectrum Act specifically contemplates that there will be some independent state or local network deployments that will be coordinated or integrated with the nationwide PSBN—and that the Commission would have a role in facilitating these deployments.

For example, the Spectrum Act confers upon States the ability to opt-out of the FirstNet-directed nationwide broadband deployment.²⁵ In the case of a state that elects to opt out, the Commission must approve the interoperability showings and deployment plans of these jurisdictions. By virtue of giving states an opt-out election, it would be entirely consistent with the Spectrum Act to permit waiver recipients to continue their deployment, particularly in the event they may want to take advantage of this option.

The Spectrum Act also requires FirstNet to leverage existing “Federal, State, tribal, or local infrastructure” “to the maximum extent economically desirable.”²⁶ The waiver deployment infrastructure will be extremely “economically desirable” for these purposes. By

²⁵ *Id.* § 6302.

virtue of the conditions of the waivers—which require interoperability with the nationwide network—and the extensive work that has already been done by the Commission,²⁷ the waiver deployments are going to be built from the ground up to be interoperable. Therefore, the Spectrum Act encourages the preservation of these options to assist FirstNet in reaching its goals.

Preservation of the waivers and grant of additional waivers to accelerate deployment of the nationwide PSBN is also consistent with the Commission’s responsibility to regulate spectrum in the public interest.²⁸ The Commission has previously recognized that there are significant public benefits associated with allowing the construction of the waiver networks to proceed to meet the needs of first responders long before the national network can realistically be operational.²⁹ As discussed in more detail below, the work of the waiver jurisdictions has already been and will continue to be extremely valuable to the nationwide public safety broadband deployment.³⁰

The Commission has various regulatory mechanisms available under its statutory authority to promote these benefits by allowing the currently authorized and new waiver jurisdictions to move forward. As an initial matter, the Commission often imposes conditions on licenses or adopts rule waivers, especially in the context of transitions of spectrum or interactions

²⁶ *Id.* § 6206(c)(3).

²⁷ *See, e.g., Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks*, PS Docket No. 06-229, 25 FCC Rcd 17156 (PSHSB 2010) (“*Interoperability Waiver Order*”).

²⁸ *See* 47 U.S.C. § 303.

²⁹ *See Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks*, PS Docket 06-229, *Order*, 25 FCC Rcd 5145, 5150 ¶¶ 14-15 (2010) (“*Waiver Order*”) (concluding that “the public interest is served by allowing jurisdictions to begin deployment and speed services to the public safety community,” and recognizing “the critical public safety need for prompt deployment and access to broadband communications infrastructure that meets public safety’s needs”).

³⁰ *See infra* Section III.

with incumbent operators. For example, the Commission has issued licenses conditioned on protecting existing operations through technical interference protections such as power limits, geographic exclusion zones, or other transitional means.³¹ Adopting similar conditions or waivers in this case to facilitate the transition of the waivers without any disruption to the ongoing network development activities of the waiver jurisdictions would be consistent with prior precedent and with the Commission's statutory authority under the Communications Act and the Spectrum Act.

Even after the issuance of the license to FirstNet, which is not expected for several months, the Commission has many mechanisms available to allow the current and new waiver recipients to continue with early deployment of the nationwide PSBN. The Commission suggested several potential mechanisms in the Public Notice.³² Three such mechanisms are discussed below.

Modification of the Waivers: Pursuant to its Section 303(r) authority to adopt rules, regulations, and conditions,³³ and its waiver authority under Section 1.4 of its rules,³⁴ the Commission could condition early deployment on executing leases with FirstNet. As currently written, the waivers require a lease with the PSST,³⁵ so a transition of those leases to FirstNet as the new Public Safety Broadband Licensee will be required. Additionally, because the leases are set to expire in September 2012, soon after the statutory deadline for the establishment of

³¹ See, e.g., *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, Report and Order, 18 FCC Rcd 25162, 25207-25210, ¶¶ 117-124 (2003) (“AWS-I Report and Order”).

³² Public Notice at 3-4.

³³ 47 U.S.C. § 303(r).

³⁴ 47 C.F.R. § 1.4.

³⁵ *Waiver Order*, 25 FCC Rcd at 5152-5156 ¶¶ 20-34.

FirstNet, the Commission would likely need to specify that it authorizes the waiver recipients to continue operations during the negotiation and execution of new leases with FirstNet.

Conditions on the Public Safety Broadband License: Pursuant to its Section 301 licensing authority,³⁶ and its Section 303(r) authority to impose restrictions and conditions on spectrum use,³⁷ in combining the D Block and Public Safety Broadband licenses and issuing a new single Public Safety Broadband Spectrum license to FirstNet, the Commission could require (or encourage), through appropriate conditions, the new licensee to work with the waiver recipients on a transitional basis to negotiate and execute a spectrum lease once FirstNet is operational. Placing conditions on newly created licenses requiring the licensee to work collaboratively with incumbent operators is not unusual. For example, when the AWS-1 band was transitioned from Federal government operations to commercial use, the new licensees were required to facilitate the transition of incumbent users to new spectrum and protect these spectrum users in the interim.³⁸ Because the early deployments already are conditioned on interoperability with the PSBN, among other conditions that would serve the public interest for early deployments, it is anticipated that integrating the waiver jurisdiction's PSBN deployment into the nationwide PSBN would be substantially less problematic than other transitions.

Special Temporary Authorizations: Pursuant to its Section 309(f) authority to grant temporary authority in exceptional circumstances,³⁹ the Commission could convert the waivers to Special Temporary Authorizations ("STAs"), or issue supplemental STAs, to allow continued operations after the issuance of a license to FirstNet. The STAs could be conditioned

³⁶ 47 C.F.R. § 301.

³⁷ 47 U.S.C. § 303(r).

³⁸ See *AWS-1 Report and Order*, 18 FCC Rcd at 25179-25188, ¶¶ 47-60, 25205-25212, ¶¶ 112-131.

on future integration with the deployment of a State taking advantage of the opt-out provisions of the Spectrum Act,⁴⁰ or execution of an agreement with FirstNet. Under Section 309(f) of the Communications Act, STAs are time-limited to 180 days, with the possibility for a 180-day extension,⁴¹ which would provide an appropriate transitional time period to facilitate a long term solution.

While each of these options will require coordination with FirstNet, this is no different than when the PSST was the PSBL. FirstNet is given broad discretion to design and deploy the network within the confines of its license and the Spectrum Act.⁴² There is ample flexibility in the Spectrum Act for it to reach agreements with the waiver jurisdictions to incorporate their existing and planned deployments to the benefit of the overall national public safety network. Given the Commission's continued statutory authority over this spectrum, and the broad flexibility afforded to FirstNet, the Commission should allow the current waiver jurisdictions to move forward and to grant authority to additional jurisdictions (properly conditioned), thereby maximizing the benefits that will be realized by early deployment of the PSBN.

C. The Spectrum Act Authorizes New Partnership Opportunities That Can Maximize the Value of Early Deployment

In acting to facilitate the transition of the waivers to the new structure, the Commission should also preserve the ability for jurisdictions to engage in partnerships, wholesale agreements, or other arrangements with users that will allow for infrastructure sharing

³⁹ 47 U.S.C. § 309(f).

⁴⁰ *See* Spectrum Act § 6302(e).

⁴¹ 47 U.S.C. § 309(f).

⁴² *See* Spectrum Act § 6206.

on a secondary basis and revenue generation for the PSBN, consistent with applicable rules. Both FirstNet and states exercising the opt-out option are given the ability to engage in these sorts of infrastructure-related agreements by the Spectrum Act.⁴³ The Commission should extend this same flexibility to the current and future waiver jurisdictions, which would be consistent with the Commission’s authority under Section 6010 to allocate the spectrum “for use by public safety entities in accordance with the provisions of the Act” and its authority under Section 6201(c) to “take all actions necessary to facilitate the transition” to FirstNet.

* * * * *

At a minimum, it seems unlikely that the waiver recipients would be able to execute new leases with FirstNet by the September, 2012 expiration of the current spectrum lease with the PSST. Based upon the time that will be required to establish FirstNet, to issue a license to FirstNet, and to finalize a permanent arrangement between the waiver jurisdictions and FirstNet, the Commission should expect that some short-term solution will be required after September 20, 2012. As such, the Commission should be prepared to extend the waiver jurisdictions’ operating authority on an interim basis—whether through waiver, STA, or another mechanism—to facilitate a smooth and orderly transition. Additionally, the Commission should exercise its authority to grant additional public safety waivers with appropriate conditions to advance the public interest.

⁴³ See *id.* §§ 6206(c) (encouraging FirstNet to leverage commercial infrastructure), 6208 (on leasing agreements between FirstNet and non-public safety users on a secondary basis), 6302(g) (allowing for public-private partnerships between opt-out states and other entities).

III. THE COMMISSION SHOULD PERMIT CURRENT WAIVER RECIPIENTS TO MOVE FORWARD AND GRANT AUTHORITY TO ADDITIONAL JURISDICTIONS FOR EARLY DEPLOYMENT

A. Early Deployments Will Be a Valuable Asset to the Forthcoming Nationwide Network

Alcatel-Lucent urges the Commission to permit waiver jurisdictions to continue their progress and also to grant additional waiver petitions to states that seek to expeditiously deploy the PSBN. Early-deployment and interoperability work performed by waiver jurisdictions in partnership with the Commission have been extremely valuable for moving us closer to a nationwide network. As recognized by the Commission's Emergency Response Interoperability Center, Public Safety Advisory Committee:

Network evolution must consider early (waiver) deployments and accommodate them into the nationwide network. These pioneer networks constitute important opportunities for learning and technical advancement. In addition, the field experience gained in the planning, deployment, and operation of these networks will help inform future network evolution decisions. Thus, it is important that these networks are able to deploy with confidence that they will not be stranded so long as they adhere to current and future regulations and guidelines, in particular those related to adherence to standards.⁴⁴

The Commission's waiver process has proved to be of critical importance to working through the many governance and technical issues that the nationwide network is sure to face, and that work should be allowed to continue. Early network deployments will provide substantial benefits to the forthcoming FirstNet nationwide PSBN. In addition to early deployments presenting an accelerated timeframe for providing first responders with the benefits

⁴⁴ Emergency Response Interoperability Center Public Safety Advisory Committee (PSAC), Considerations and Recommendations for Evolution of the Public Safety Wireless Broadband Network PSAC Network Evolution, Working Group Report, at 5, May 24, 2011, *available at* <http://transition.fcc.gov/bureaus/pshs/advisory/eric/PSAC%20Interoperability%20WG%20Report%20May%2024%20FINAL.pdf>.

of the PSBN, they can supply FirstNet much needed practical knowledge to be used in deploying the nationwide network.

There is much to learn, and much that has gained through the work of waiver jurisdictions thus far, and there is no reason to halt that learning process by ending the progress of existing and pending early deployment efforts. Public safety agencies must work out the operational complexities and governance challenges that arise in moving to a multi-agency shared network supporting voice, video and data. The technical community must learn the best way to support prioritization, preemption, security, and quality of service for first responders. LTE provides first responders with a wide array of potentially new applications, yet it is still being determined how these applications can best support public safety operations.

Experience thus far shows that the FirstNet network deployment will likely be an iterative process, with many lessons learned along the way. No amount of planning on paper will substitute for real-world experience. Alcatel-Lucent urges that the public interest would be served by continuing to learn those lessons through early deployments so that FirstNet is that much more prepared to implement the nationwide PSBN. The impact to FirstNet of the Commission permitting these network deployments to move forward would be decidedly positive, while halting early deployments would squander substantial benefits to public safety.

To date, the multi-stakeholder efforts have taken great pains to ensure that early deployments avoid stranded investments and are implemented in a way to facilitate their smooth integration into the larger nationwide PSBN. For example, The PSST's Interconnectivity Infrastructure Group ("IIG") has met with great success in adopting a consensus approach to

ensure internetworking among the early PSBN deployments.⁴⁵ In addition, the Commission, NTIA and the National Institute of Standards and Technology (“NIST”), individual waiver jurisdictions and industry have expended extraordinary resources to reach consensus on a set of interoperability requirements for early deployments.⁴⁶ The Commission requires all waiver jurisdictions to submit an interoperability showing for Commission approval before moving forward.⁴⁷ As part of this effort, and in close coordination with the Commission, the waiver jurisdictions agreed to use a common PLMN ID and common numbering scheme to facilitate internetworking and commercial roaming.⁴⁸

Furthermore, unlike FirstNet, some waiver recipients and applicants with pending waiver petitions have demonstrated they have funding and the ability to move forward right now.⁴⁹ In light of the legislation including funding of only \$7 Billion for deployment in urban and rural geographies, ignoring the additional resources existing and pending waiver

⁴⁵ See Letter from William M. Schrier, Chair, Public Safety Spectrum Trust Operator Advisory Committee, PS Docket Nos. 12-74, 06-229 (filed Mar. 26, 2012) (submitting Interconnectivity Plan produced by PSST-OAC Interconnectivity Infrastructure Group).

⁴⁶ *Id.*; see also National Public Safety Telecommunications Council, “700 MHz Statement of Requirements for Public Safety,” <http://www.npstc.org/statementOfRequirements.jsp> (last visited Apr. 16, 2012).

⁴⁷ See *Waiver Order*, 25 FCC Rcd at 5163-5164 ¶¶ 55-58.

⁴⁸ See *Request for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks*, PS Docket No. 06-229, Order, DA 12-25 (rel. Jan. 9, 2012); *Request for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Wireless Broadband Networks*, PS Docket No. 06-229, Order, DA 12-423 (rel. Mar. 16, 2012); Joint Comments of the Adams County Communication Center, the City of Charlotte, the State of Mississippi and the State of Texas, PS Docket 06-229 (filed Dec. 7, 2011).

⁴⁹ See, e.g., Letter from Alex Z. Pettit, Secretary of Information Technology and Telecommunications, Chief Information Officer, State of Oklahoma to Marlene H. Dortch, Secretary, Federal Communications Commission, PS Docket No. 06-229 (filed Feb. 1, 2012) (“Oklahoma February Ex Parte”) (indicating that “State funding is allocated right now, but the State obviously cannot commence build out of a 700 MHz PSBN without Commission authority to operate that network.”).

jurisdictions bring to the table would be short sighted. When a jurisdiction offers to build a portion of the PSBN funded completely from state resources and other grants, the Commission and FirstNet should jump at the opportunity to ease the burden on the limited resources allocated to FirstNet.

The Commission, NTIA and FirstNet should continue to learn from early implementation as the waiver jurisdictions deploy their pieces of the PSBN. Early deployments will provide real-world insight into interoperability, network deployment, and services vital to a nationwide PSBN.

B. The Commission May Impose Conditions on Early Deployments to Maximize Their Benefits

Alcatel-Lucent applauds the Commission's successful efforts to balance the urgent need to promptly implement the PSBN with the need to ensure that early deployments integrate into the forthcoming nationwide network. The conditions that the Commission has placed on waiver recipient deployments have served this goal well.⁵⁰ In light of the new legislation, Alcatel-Lucent respectfully suggests that the following criteria could be added to prior waiver grants and applied to new grants of authority for early deployment, as applicable, to maximize the benefits of early deployments and facilitate their seamless transition into the FirstNet network:

- ***All network equipment and user devices must be 3GPP compliant.*** Compliance with 3GPP standards is essential to ensure easy integration of early deployments with the FirstNet network.⁵¹ 3GPP is the internationally recognized body tasked with

⁵⁰ See *Waiver Order*, 25 FCC Rcd at 5151-5166 ¶¶ 17-64; see also *Interoperability Waiver Order*.

⁵¹ Confidence in the interoperability of 3GPP compliant LTE interfaces is well justified as is demonstrated by the long list of interfaces that already have been demonstrated as interoperable in commercial networks, including, but not limited to: Uu- LTE air interface; S10 – MME to MME support for Category 1 handover support; S1-u – between eNodeB and SGW;

setting standards for LTE, the technology platform to be used for the PSBN. Simply put, as long as the equipment is 3GPP compliant any such integration into the FirstNet network should be possible through software/firmware updates. Compliance with 3GPP standards essentially removes the risk of needing to swap out or warehouse of hardware deployed in these early networks. The Spectrum Act encourages FirstNet to pursue a nationwide broadband architecture based on commercial open-standards technology.⁵² To the extent the Commission requires 3GPP compliance for waiver deployments, the only risk to interoperability with the future nationwide network would arise to the extent FirstNet fails to honor the legislative intent to similarly focus on commercial open-standards technology.

- ***Early deployment interoperability showings should incorporate the forthcoming recommendations of the Public Safety Interoperability Board.*** Today, the Commission conditions early deployment on approval of an interoperability showing submitted by each waiver jurisdiction.⁵³ The multi-stakeholder process of refining these interoperability requirements has been vital to facilitating internetworking parameters for the multiple waiver jurisdictions. The Commission should continue to condition deployment on a showing of interoperability, but, consistent with the Spectrum Act, should require that these interoperability commitments are consistent with the recommendations of the Public Safety Interoperability Board, as transmitted to FirstNet.⁵⁴
- ***Future waivers should be granted on a state-wide (or multi-state) basis.*** Current waiver recipients should be permitted to move forward regardless whether they were granted at the state, county, city or other geographic level. Consistent with the Spectrum Act's grant of authority to the Governor of each state to evaluate FirstNet's planned build-out of the network, and make the decision to facilitate that deployment or opt-out,⁵⁵ any future Commission authorizations for early deployment should be granted at the state (or multi-state) level. Any new early deployment proposals at the county, city or other smaller-than state-level should include express state-level concurrence and state-level oversight to coordinate all early deployments within the state.

The Commission has already recognized a preference for state-wide early deployments. As the Commission has found:

S1-MME – between eNodeB and MME; S5 – between SGW and PGW; S6a – between MME and HSS; S11 – between MME and SGW.

⁵² Spectrum Act § 6206(b)(2)(B)(i).

⁵³ See *Waiver Order*, 25 FCC Rcd at 5163-5164 ¶¶ 55-58.

⁵⁴ Spectrum Act § 6203.

⁵⁵ *Id.* § 6302(e).

States can ensure that early deployments are developed to be consistent with overall plans for intra-state interoperability, and can, consistent with existing mechanisms concerning narrowband interoperability, serve as a single interface with the PSST and ERIC to minimize the complexity that would otherwise be inherent in coordinating numerous interactions on a jurisdiction-by-jurisdiction basis. Further, we believe that state-level waiver deployments will facilitate equipment development and purchase, by ensuring there is a critical mass of potential users even in the early deployment phase to encourage vendors to compete to provide reasonably priced equipment.⁵⁶

The Commission further found that, “state level systems have the advantage of including a mix of populations, including both urban and rural areas. Thus, state-level governance mechanisms are more likely to ensure that rural areas are included as part of overall deployment plans.”⁵⁷ These benefits can also be achieved through multi-state deployments, where multiple states agree to coordinate as a region. For these reasons, Alcatel-Lucent recommends that future waiver grants be provided on a state-wide, or larger, basis.

- ***The Commission should place particular scrutiny on LTE core deployment to promote interoperability with FirstNet.*** To help maintain interoperability, and consistent with commercial network architecture, a nationwide PSBN only needs a handful of LTE cores to facilitate network operations and geographic redundancy. A single core can, *and should*, support multiple states. A hosted core model, where many jurisdictions share core services, is an appropriate and judicious investment for waiver jurisdictions to make to support early deployment. A hosted core model will also demonstrate centralized core services to the extent they are, as anticipated, employed by FirstNet in its nationwide architecture. The City of Charlotte, NC, for example, has chosen to deploy a hosted core solution instead of investing in its own core facilities. Charlotte’s hosted core model will provide insight and a learning opportunity paving the way for FirstNet to provide core services. Critically, the transition of the Charlotte core services from its current hosted vendor, Alcatel-Lucent, to a future FirstNet core would be seamless. Alcatel-Lucent is also aware of other jurisdictions seeking to coordinate on core deployment to defray costs of the core. While new core deployment should not be prohibited—one hosted core will not suffice for all early deployments—such deployment should be evaluated with a view that it must work in tandem with the nationwide PSBN.
- ***Deployment should be planned for the near term.*** There is wide agreement about the urgency of deploying the nationwide interoperable PSBN. However, there is no statutory timeline for when FirstNet must commence its build-out. Indeed, the FirstNet Board may not even be in place until August 2012 and it is unclear when FirstNet will issue its first request for proposal (“RFP”), let alone go through the

⁵⁶ Waiver Order, 25 FCC Rcd at 5162 ¶ 50.

⁵⁷ *Id.*

multiple steps required to award contracts and commence build-out. There also is a concern that, when the FirstNet network does break ground, deployment will not occur at the same time and at equal speed throughout the country. In other words, build-out to certain geographies may be delayed months or years beyond the build-out starting date.

A key benefit to waiver jurisdictions moving forward is that they will provide a jump start on the FirstNet network. Of course, that public interest benefit would be substantially mitigated if jurisdictions with authority to deploy fail to do so expeditiously. For this reason, the Commission should grant new waivers only where the jurisdictions have demonstrated a concrete commitment to build-out, including funding.

- ***Allow business model flexibility for early deployment to the full extent permitted by the new law.*** The Commission has long recognized the benefits of broadening the user base for the public safety spectrum, and in particular potential partnerships between public safety users and secondary users, such as utilities.⁵⁸ The Spectrum Act removes all doubt that public safety jurisdictions may enter into partnerships with a broad range of entities to assist with deployment, operation and maintenance of the network, and that such entities can and should be permitted to utilize the spectrum on a secondary basis.⁵⁹ Ensuring that waiver jurisdictions have the same flexibility to pursue dynamic partnerships with a broad range of entities, including government agencies and users beyond the first-responder community, utilities, commercial telecommunications carriers, etc., is critical. These potential partners own towers and other existing infrastructure, including in rural geographies, that could substantially reduce the costs of early deployment, create a sustainable source of funding for early deployments, and will demonstrate the robust partnership ecosystem available for the future nationwide network. The Spectrum Act provides far greater flexibility for the PSBN to leverage commercial partnerships in their efforts to build out the network. Therefore, the Commission should permit early deployments maximum flexibility to enter into such partnerships.
- ***Early deployment authority should immediately be extended to include the D Block.*** The legislation requires the Commission to allocate the D Block for public

⁵⁸ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, Amendment of Part 90 of the Commission's Rules*, PS Docket Nos. 06-150, 06-229, WP Docket No. 07-100, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 26 FCC Rcd 733, 770 ¶ 135 (2011) (recognizing that allowing secondary users is an important policy goal “in light of otherwise uncertain nature of the funding need to ensure nationwide build out of the public safety broadband network”).

⁵⁹ See Spectrum Act §§ 6206(c) (encouraging FirstNet to leverage commercial infrastructure), 6208 (on leasing agreements between FirstNet and non-public safety users on a secondary basis), 6302(g) (allowing for public-private partnerships between opt-out states and other entities).

safety use in addition to the currently assigned 700 MHz public safety spectrum.⁶⁰ The Commission should immediately revise all granted waivers to include the D Block spectrum and should also include D Block spectrum in future authorizations for early deployment of the PSBN.

IV. STATE IMPLEMENTATION IS CRITICAL TO A SUCCESSFUL NATIONWIDE NETWORK

Alcatel-Lucent has outlined its view of the Commission's continuing legal authority related to existing and pending waivers based on our reading of the plain language of the Spectrum Act, unaccompanied as it is by an explanation of Congressional intent. The Spectrum Act was passed in the context of active Congressional consideration of various PSBN implementation schemes, not in a vacuum.⁶¹ As a consequence, Alcatel-Lucent is not suggesting that the Commission proceed independent of such considerations. Instead, Alcatel-Lucent has outlined those authorities to identify *tools* at the Commission's disposal that can be employed to ensure a successful PSBN through the value-add of interoperable early deployments. Similarly, NTIA itself has a broad set of tools it can leverage to advance the interests of the nationwide PSBN in the form of the policy underlying the State and Local Implementation grant program, as well as its anticipated role in standing up FirstNet. Partnership and collaboration between the Commission, NTIA, and FirstNet, leveraging the tools each brings to the table, will maximize the resources available for the successful deployment, operation, and maintenance of a nationwide PSBN.

⁶⁰ *Id.* § 6201(a).

⁶¹ *See e.g.*, Middle Class Tax Relief and Job Creation Act of 2011, H.R. 3630, § 4221, *et seq.* (passed by the House of Representatives on December 13, 2011) (specifying state implementation).

A. Early Implementation Developments May Have the Consequence of Encouraging States and Major Local Jurisdictions to Emphasize Opt-out Strategies

Alcatel-Lucent is concerned that proposed Commission action to reject all pending waiver applications,⁶² as well as NTIA recommendations to existing waiver and BTOP-funded jurisdictions not to invest in network deployment, is creating an environment that will encourage states and major local jurisdictions to focus on opt-out strategies to the detriment of the future nationwide PSBN.

In recent days, an Order has been circulated dismissing all pending waiver requests, notwithstanding the clear proposals and intent of some proposed-waiver jurisdictions to comply with any and all future interoperability requirements adopted for the nationwide network. For example, the State of Oklahoma, which has had a waiver request pending before the Commission since August, 17, 2010, has proposed to invest *\$150 Million of its own resources* to deploy a statewide IP backbone and LTE network. Oklahoma's proposed project, based entirely on commercial open-standards (3GPP) technology, would also include the offering of hosted LTE core services to other jurisdictions that are similarly interested in early-deployment, but prefer to focus precious resources on radio access network ("RAN"). As Oklahoma has stated to the Commission,⁶³ its funding is available now but not indefinitely, and it is willing to assume all risks of future interoperability compliance with the nationwide network. Considering the clear ability of the Commission to ensure future interoperability by requiring early-deployment compliance with commercial open-standards (3GPP), denying Oklahoma's waiver request amounts to taking \$150 Million off the table for FirstNet network deployment.

⁶² Ted Gotsch, *Commission Circulates Order Calling For Dismissal of 700 MHz Waiver Requests*, TR Daily, April 13, 2012; *see also*, FCC Items on Circulation, available at http://transition.fcc.gov/fcc-bin/circ_items.cgi (last visited April 18, 2011).

Similarly, Alcatel-Lucent strongly disagrees with reported statements made by NTIA discouraging waiver jurisdictions, including BTOP grantees, from building out their networks based on concerns regarding overall network design.⁶⁴ NTIA is reportedly even encouraging BTOP recipients to consider their options for returning or warehousing purchased equipment that is ready to be deployed for fear that early deployments will amount to stranded investments in technology once FirstNet deploys the nationwide PSBN.⁶⁵

NTIA should not discount the countless hours spent thinking through network deployment and interoperability at NIST, in Commission proceedings, and within the public safety jurisdictions themselves. Furthermore, the Commission and NTIA should be cognizant of the funds already expended by waiver jurisdictions that have diligently moved forward on the costs of planning, building, shipping, testing, and other prudent steps toward near-term deployment. While some BTOP-funded jurisdictions have encountered considerable difficulties

⁶³ See Oklahoma February Ex Parte at 1.

⁶⁴ Donny Jackson, *NTIA Cautions Against Early Public-Safety LTE Deployments*, Urgent Communications, Apr. 10, 2012, http://urgentcomm.com/networks_and_systems/news/ntia-lte-deployment-caution-20120410/.

⁶⁵ See *id.* It is Alcatel-Lucent's understanding that NIST has registered concerns with the acquisition of LTE technology in advance of a FirstNet deployment on interoperability grounds. Alcatel-Lucent commends NIST for its leadership at the PSCR, but respectfully disagrees with any such concerns on the merits. Acquisition and deployment of 3GPP-compliant LTE technology today should not have negative implications for interoperability to the extent FirstNet itself deploys 3GPP-compliant LTE technology nationwide in the future. Instead of registering objections to the deployment of commercial open-standards technology today, NIST must focus its attention on steps it can take to ensure a nationwide network is deployed and operational as soon as possible. To that end, NIST implementation of the Public Safety Communications Research and Development Program, Spectrum Act § 6303, particularly as it relates to expeditious development of mission critical voice over LTE (MCVoLTE), is perhaps the most important task for NIST at this time. The short term development of MCVoLTE could result in billions of dollars in savings to our Nation's first responders, by allowing them to migrate all communications onto the PSBN, rather than continuing to run duplicative, legacy narrowband voice networks.

in moving their projects forward,⁶⁶ others, such as the City of Charlotte, are not only on schedule, but represent an ideal early-deployment that can be seamlessly integrated into a future nationwide network.

Alcatel-Lucent urges that NTIA and the Commission embrace the efforts of jurisdictions that are ready to move forward, not discourage them. Any concerns related to interoperability and transition costs can be mitigated by early deployments meeting interoperability requirements set by the Commission, including a requirement to deploy only 3GPP compliant equipment and other conditions proposed above. In Alcatel-Lucent's view, requiring early deployment compliance with commercial open-standards (3GPP) is the single best defense against investments in stranded technologies. As long as early-deployment focuses on 3GPP-compliant technologies, and such deployments are scrutinized for over-redundant core deployment consistent with our views as stated above, the greatest risk to future interoperability of the nationwide PSBN would arise if FirstNet itself "goes off the rails" and attempts to deploy a proprietary technology in the nationwide PSBN.

Through Alcatel-Lucent's extensive work with state and local governments and public safety jurisdictions, Alcatel-Lucent understands that many states are wary of any network that is built without accounting for the desires and preferences of the state and local first responders that will actually be using the network. For example, in heavily rural states, a higher or equivalent priority may be assigned to geographic coverage compared to population coverage, whereas a future FirstNet network may initially focus on population coverage. FirstNet must

⁶⁶ See Donny Jackson, *LA-RICS To Restart Bidding For LTE, P25 Projects*, Urgent Communications, Aug. 2, 2011, http://urgentcomm.com/networks_and_systems/news/larics-lte-p25-rebidding-20110802; *San Jose Exits Controversial BayWeb 700 MHz Stimulus Project*, StimulatingBroadband.com, Dec. 13, 2011, <http://www.stimulatingbroadband.com/2011/12/san-jose-exists-controversial-bayweb.html>.

avoid expending the \$7 Billion provided by the legislation to deploy a network that first responders decide not to use. Similarly, it would disserve the public interest for FirstNet to go through a time-consuming and expensive RFP process, only to see a critical mass of states opt-out from the FirstNet network.

Alcatel-Lucent does not view the potential for mass opt-outs by dissatisfied states as a welcomed potential development and recognizes such a scenario as potentially injurious to nationwide interoperability and the long-term economic viability of a nationwide PSBN. Fortunately, the Commission and NTIA, in coordination, can leverage their authorities as included in the Spectrum Act to create an inclusive environment that renders the opt-out process an afterthought.

B. Policy Underlying the State and Local Implementation Grant Program Can Set the Proper Tone for FirstNet Collaboration and Partnership with States

NTIA is charged with responsibility for creating the State and Local Implementation grant program.⁶⁷ The program should encourage states to take stock of infrastructure and property they possess and are prepared to provide to FirstNet for its use in deploying the network. To ensure states begin to see an inclusive environment, where they are intended to partner with FirstNet to implement the nationwide network, NTIA should include clear policy guidance in a preamble to the grant program once announced that conveys that the information collected by states will be used *by* the states for implementation of the PSBN within their borders.

Critically, in adopting such a footing, NTIA can also encourage states participating in the grant program to include in their activities additional information related to potential partners interested in leasing network capacity and infrastructure, sharing infrastructure,

and willing to provide additional cash resources to further network deployment. As noted above, states are uniquely situated to leverage potential public-private partnerships in a more granular fashion than a federal entity with scarce resources.

C. Selection of FirstNet Board Members Who Value Collaboration and Partnership with States Will Further the Aims of the State and Local Implementation Grant Program and Lead to a Successful Nationwide Deployment

To match a policy preference for state implementation in the grant program, NTIA should similarly ensure it recommends to the Secretary of Commerce candidates to the FirstNet Board that reflect that same implementation approach. Individuals who reflect a “FirstNet as Federal Carrier” approach to network implementation, and a “top-down” implementation preference, should be rejected. Candidates who have actually deployed commercial or state and local government networks, who understand the vast resources existing state-owned infrastructure can provide to a nationwide network, and who understand the value of an end-to-end IP infrastructure for purposes of carrying many different types of traffic in a secure, reliable fashion (e.g., public safety mission critical communications and commercial traffic) should be emphasized. In recommending candidates for the FirstNet Board who recognize the constructive role states can play in implementing the nationwide network, NTIA can ensure the policy foundation of the State and Local Implementation grant program is realized in actual network deployment.

Combining a State and Local Implementation grant program and FirstNet Board membership that value state implementation can essentially turn the state opt-out scenario into a state opt-in scenario, whereby FirstNet proactively partners with states for implementation of the nationwide PSBN after it completes its nationwide architecture. Partnership and collaboration

⁶⁷ Spectrum Act, §§ 6301, 6302.

with states at the front end of this process can ensure the opt-out provision in the Spectrum Act is an afterthought at the back end.

FirstNet has authority through the Spectrum Act to implement the nationwide network in many different ways, and should employ the flexibility the statute affords.⁶⁸ In light of the scant federal funding allocated to the nationwide PSBN, FirstNet should maximize state-based public-private partnerships and other funding opportunities that can be best leveraged through a strong state role in FirstNet network implementation. In short, the FirstNet network should be conceptualized as a network of network deployments, accounting for state implementation of the RAN, just as a commercial service provider would conceptualize a nationwide network. By basing the PSBN on substantial input from, and implementation by, individual states, FirstNet can largely negate the need for states to opt out of the FirstNet network.

Alcatel-Lucent is not suggesting that FirstNet should defer to the states on overall network architecture or matters that would impede interoperability. Alcatel-Lucent also does not envision the FirstNet PSBN would involve 50 state-based networks. To the contrary, FirstNet has the flexibility to account for a mix of options within the nationwide network: states that choose to implement a statewide unit of the nationwide network, multiple-states that wish to deploy as a larger, regional unit of the nationwide network, as well as states that would prefer a turn-key, nationwide solution.

However, mandating to the states a flat, nationwide, take-it-or-leave-it architecture could be detrimental to the success of the network. The states are better suited to actual implementation than a national-entity with limited resources. The states are in the best

⁶⁸ See Spectrum Act § 6206.

position to identify and leverage state-owned infrastructure for efficient, lowest-cost deployment. Further, state implementation brings in a broader pool of potential partners, such as rural and regional telecommunications carriers and utilities, to help fund the network and offer their own existing local infrastructure to the PSBN. Utilities, especially, are uniquely situated to partner with public safety for build-out at the State level. Perhaps of greatest significance, to a greater extent than other potential commercial partners, utilities have needs similar to first responders for mission critical communications and a focus on geographic coverage (as opposed to population coverage). Further, they have extensive infrastructure that could be leveraged by FirstNet, including hardened radio sites, fiber networks, microwave networks, and the like.

In sum, every state that wishes to take the laboring oar in contributing funds, leveraging infrastructure, and creating a robust partnership ecosystem for network build-out should be seen as an opportunity to make the nationwide network a reality. Furthermore, with appropriate Commission-enforced conditions, the waiver jurisdictions are a perfect mechanism to start deployment of the nationwide network. The Commission's authority to promote partnership and collaboration between FirstNet and the states is clear through the Spectrum Act itself, and maintaining the Commission's waiver, interoperability and early-deployment work will promote such partnership and collaboration.

In short, the Commission, NTIA, and the forthcoming FirstNet, have a powerful set of tools, which together can be leveraged for the successful deployment, operation, and maintenance of the nationwide PSBN.

V. CONCLUSION

For the foregoing reasons, permitting current waiver jurisdictions to move forward with early deployment and authorizing additional jurisdictions to commence early

deployment of the nationwide PSBN is consistent with the Spectrum Act and would serve the public interest. Alcatel-Lucent also urges FirstNet to take advantage of state network implementation in its planning and build-out of the nationwide PSBN.

Respectfully submitted,

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/s/

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